CENG 255 – Introduction to Computer Architecture

Term – Fall 2016 (201609)

Instructor
Dr. Kin Fun Li
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Office Hours
Days: Wednesdays
Time: 10:30-11:30
Location: EOW-409

Course Objectives
• To gain an understanding of how a computer system works and its subsystems interact
• To familiarize the control of low-level computer operations using assembly language programming

Learning Outcomes
• Able to select suitable computer hardware and system software for specific engineering applications
• Able to synergize computer system hardware and software
• Able to relate high-level algorithmic concepts and programming languages to machine-level system hardware and software

Syllabus
The architecture of computer systems including concepts such as processor, memory, buses, input/output, instruction sets, interrupt processing, pipelining, performance. Families of processors, CISC, RISC. Memory organization and management including cache, virtual memory, protection. Computer arithmetic. Assembly language programming, assemblers, linkers and loaders. Hardware/Software interaction.

A-Section(s):
A01 / CRN 10434
A012 / CRN 10435
Days: Tue, Wed, Fri
Time: 09:30-10:20
Location: ECS-125

Required Text
Title: Computer Organization & Embedded Systems (6)
Author: Hamacher, Vranesic, Zaky, & Manjikian
Publisher: McGraw Hill
Year: 2012

Labs
Location: ELW-B328

A01 / CRN 10434
B01 M 12:15-15:15 Alipour, Philip B. (philipbaback_orbsix@msn.com)
B02 T 14:00-17:00 Shah, Jay (jayshah@uvic.ca)
B03 T 17:00-20:00 Hazmi, Ibrahim (ihas@uvic.ca)
B04 R 12:15-15:15 Jokhio, Salahuddin (sjokhio@uvic.ca)
B05 F 13:45-16:45 Mostafavian, Seyedali (alimst@uvic.ca)
B06 R 15:15-18:15 Behrouzinekoo, Maryam (maryam.bhr1989@hotmail.com)
B07 R 18:30-21:30 Keshavarz Hedayati, Babak (babak@ece.uvic.ca)

Lab Manual:
Title: CENG 250 Laboratory Manual
Author: KFL et al.
Publisher: Available on Course Web
www.ece.uvic.ca/~kinli/ceng255/
References: Lecture notes and article reprints available on Course Web (IBM/architect)

Assessment:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Due Dates</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>00%</td>
<td>Due dates to be announced</td>
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<tr>
<td>Labs</td>
<td>25%</td>
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<tr>
<td>Mid-term</td>
<td>20% each (X2)</td>
<td>Date: Oct 5 and Nov 4, 2016</td>
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<tr>
<td>Final Exam</td>
<td>35%</td>
<td>Date and Time to be announced</td>
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Note: Failure to complete all laboratory requirements will result in a grade of N being awarded for the course.
Failure to pass the final exam will result in a failing grade for the course.

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

There will be no supplemental examination for this course.

Note to Students:
Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Secretary to set up an appointment.

Accommodation of Religious Observance
http://web.uvic.ca/calendar2016-09/general/policies.html

Policy on Inclusivity and Diversity
http://web.uvic.ca/calendar2016-09/general/policies.html

Standards of Professional Behaviour
You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.
https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Undergraduate Calendar for the UVic policy on academic integrity.
http://web.uvic.ca/calendar2016-09/undergrad/info/regulations/academic-integrity.html

Course Lecture Notes
Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.